Testimony Presented Before the Senate Committee on Higher Education March 21, 2019 at 3:00 p.m. By

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SCR 125 / SR 95 – URGING THE UNIVERSITY OF HAWAII, IN CONSULTATION WITH ITS FACILITIES OFFICES, THE DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES, AND INDUSTRY REPRESENTATIVES, TO DEVELOP AN INTEGRATED PLAN TO PROVIDE CERTIFICATES, DEGREES, AND ASSOCIATED PATHWAYS IN THE AREAS OF FACILITIES MAINTENANCE AND CONSTRUCTION MANAGEMENT.

Chair Kim, Vice Chair Kidani, and members of the committee:

The University of Hawai'i ("University") supports SCR 125/SR 95 and offers comments below.

The State of Hawai'i has experienced significant growth in the construction industry and a spurt in high-rise and luxury condominium development. Today, the built environment is much more complicated and technical in many aspects when compared to facilities constructed over 30 years ago. Additionally, our natural environment presents challenges to facility owners that are unique to our islands. However, as set forth in SCR 125/SR 95, Hawai'i lacks a formal training pipeline for facilities maintenance and construction management positions to ensure a continuous stream of talent in these areas.

Currently, the University offers 2-year and 4-year programs in the construction management and facilities maintenance arena:

The University of Hawai'i – West O'ahu established a Facilities Management program in 2016 largely in response to state workforce needs. This program consists of two degrees – a Bachelor of Arts in Business Administration and a Bachelor of Applied Science – each with a concentration in Facilities Management.

The University of Hawai'i at Mānoa College of Engineering currently offers a Bachelor of Science degree in Civil and Environmental Engineering (CEE) with a Sustainability and Innovation track. Established in Fall 2018, this specialization track specifically covers asset life cycle analysis in the following courses: Principles of Sustainability Analysis and Infrastructure: Project Impacts, Policy and Sustainability. In 2018, approximately 18% of CEE students indicated a preference for this specialization track.

The College of Engineering is also scheduled to offer a Bachelor of Science degree in Construction Engineering in the Fall 2019 semester. This will allow students to obtain a more specialized degree than the current CEE degree by emphasizing the processes of material and supply flows, scheduling, crew management, site compliance and safety, and other topics.

Maui College currently offers a Construction Technology program, which prepares students in general building construction and maintenance of large or small structures. Students have the opportunity to explore a wide range of specialties ranging from carpentry, drafting, welding

and masonry to architectural engineering, CAD technology and requirements for Green Building certification.

Since Fall 2013, Kaua'i Community College has offered a Facilities Engineering Technology program which educates students in electrical applications and practices, refrigeration and air conditioning systems, and drywall, painting, and construction methods. Available certificates include a Certificate of Competence, Mechanical Electrical and Plumbing Certificate of Competence, and a Certificate of Achievement.

SCR 125/SR 95 urges the University of Hawaii to develop an integrated plan to provide certificates, degrees and associated pathways in the areas of facilities maintenance and construction management, in consultation with representatives from the public and private industry. This collaborative approach to developing an integrated plan is essential for ensuring all critical aspects of a structure and its subsystems are understood and managed in an enterprise fashion. Additionally, a holistic approach to understanding the life cycle of an asset and its impact on budget and financing is also an element that must be incorporated. SCR 125/SR 95 appropriately encourages the University to drive the growth in this area.

Based on the above, the University supports SCR 125/SR 95.